Claims:

1. A method for operating a welding apparatus, wherein a welding torch or an electrode is fed with controlled or regulated electric power, and wherein, at least during the welding procedure, operating states are detected and transmitted to a computing unit and processed in said computing unit, characterized in that the detected operating states are processed according to stored specifications and compared with stored states, and that messages automatically allocated as a function of the comparative results are transmitted to external receivers.

2. A method according to claim 1, characterized in that the messages are transmitted to allocated external receivers as a function of the comparative results.

3. A method according to claim 1 or 2, characterized in that the messages are transmitted to external receivers in an allocated manner as a function of the comparative results.

4. A method according to any one of claims 1 to 3, characterized in that the messages are transmitted to the receivers in the form of e-mails, via data networks, particularly the internet.

5. A method according to any one of claims 1 to 4, characterized in that the messages are transmitted to the receivers in the form of short messages via mobile networks.

6. A method according to any one of claims 1 to 5, characterized in that the messages are transmitted to the receivers in the form of facsimile transmissions via telecommunication networks.

7. A method according to any one of claims 1 to 6, characterized in that the messages are converted into acoustic signals to be transmitted to the receivers via telecommunication or radio networks.

8. A method according to any one of claims 1 to 7, characterized in that the detected operating states are transmitted to the computing unit via a standardized interface, particularly an OPC (object link embedding for process control) interface.

9. A method according to any one of claims 1 to 8, characterized in that the detected operating states are transmitted to the computing unit in the binary code.

10. A method according to any one of claims 1 to 9, characterized in that the detected operating states are preprocessed prior to being transmitted to the computing unit.

11. A method according to any one of claims 1 to 10, character-
ized in that the specifications and/or states are stored in the
computing unit.

12. A method according to any one of claims 1 to 11, character-
ized in that the specifications and/or states are stored in a
database connected with the computing unit.

13. A method according to any one of claims 1 to 12, character-
ized in that a unique identification of the welding apparatus is
transmitted to the external receivers along with said messages.

14. A welding apparatus including an energy source (2), particu-
larly a power source, preferably controlled or regulated by the
aid of a control device (4), and at least one welding torch (10)
or an electrode, particularly a welding wire, and further in-
cluding at least one device for the detection of operating
states and at least one computing unit (29) connected with the
at least one detection device and provided for the processing of
said operating states, characterized in that there are provided
at least one device (35) for the storage of specifications ac-
cording to which the operating states are processed, and of
states with which the processed operating states are compared,
and, furthermore, at least one device (36) for the transmission
of messages to external receivers (37), which is connected with
the computing unit (29), such that messages allocated as a func-
tion of the comparative results are automatically transmittable
to said external receivers (37).

15. A welding apparatus according to claim 14, characterized in
that a transmission device (36) is comprised of a computing unit
(29) including a connection to a data network, particularly the
internet.

16. A welding apparatus according to claim 14 or 15, character-
ized in that a transmission device (36) is comprised of a mobile
phone, preferably a GSM (global system for mobile communication)
mobile phone.

17. A welding apparatus according to any one of claims 14 to 16,
characterized in that a transmission device (36) is comprised of
a facsimile transmitter.

18. A welding apparatus according to any one of claims 14 to 17,
characterized in that a transmission device (36) is comprised of
an acoustic transmitter unit.

19. A welding apparatus according to any one of claims 14 to

18, characterized in that the detection devices and optionally the control device (4) are connected with the computing unit (29) by a standardized interface, particularly an OPC (object link embedding for process control) interface.

20. A welding apparatus according to any one of claims 14 to 19, characterized in that the computing unit (29) is integrated in the welding apparatus.

21. A welding apparatus according to any one of claims 14 to 20, characterized in that a unit (40) for the preprocessing of detected operating states prior to their transmission to the computing unit (29) is provided.

22. A welding apparatus according to any one of claims 14 to 21, characterized in that at least one database (35) connected with the computing unit (29) is provided for the storage of specifications according to which operating states are processed, and/or of states with which the processed operating states are compared.

23. A welding apparatus according to any one of claims 14 to 22, characterized in that an identification device (39) is provided.

24. A welding apparatus according to any one of claims 14 to 23, characterized in that an external receiver (37) is comprised of a welding apparatus.

25. A welding apparatus according to any one of claims 14 to 24, characterized in that at least one detection device is comprised of a temperature sensor (31).

26. A welding apparatus according to any one of claims 14 to 25, characterized in that at least one detection device is comprised of a camera (33), particularly a digital camera.